

Lecture Module - Sensors

ME3023 - Measurements in Mechanical Systems

Mechanical Engineering

Tennessee Technological University

Topic 2 - IC and MEMS based Sensors

Topic 2 - IC and MEMS based Sensors

- Integrated Circuits
- Micro Electro-Mechanical Devices
- Accelerometer
- Compass or Orientation Sensor

Integrated Circuits

Micro Electro-Mechanical Devices

Accelerometer

Compass or Orientation Sensor

Compass or Orientation Sensor

Integrated Circuits

Integrated Circuits

Generate ideas as a group.

Integrated Circuits

(space for more ideas)

Integrated Circuits
Micro Electro-Mechanical Devices
Accelerometer
Compass or Orientation Sensor
Compass or Orientation Sensor

Micro Electro-Mechanical Devices

Accelerometer

Thought Exercise: How do we measure distance (aka range)?

Accelerometer

Compass or Orientation Sensor

Thought Exercise: How do we measure **motion**?

- What variable or quantity is used to describe motion?

-
-
-

- What type of sensor is used to measure this?

-
-
-

Compass or Orientation Sensor

- What applications require this type of sensor?



Compass or Orientation Sensor

Thought Exercise: How do we measure **orientation**?

- What variable or quantity is used to describe **orientation**?
 -
 -
 -
- What type of sensor is used to measure this?
 -
 -
 -

Compass or Orientation Sensor

- What applications require this type of sensor?

